APPENDIX 1

DTD: SOXOffer.dtd.

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
Standard Offer Exchange:  Offer DTD
SOXOffer.dtd

Version 1.0  Draft
Date: 06/09/2000
ems, Copyright 2000
-->
<!--                                      -->
<!--      Revision History        -->
<!--                                      -->
<!--      SOX top element        -->
<!--                                      -->
<!ELEMENT SOX ((TargetServerList, Offer) I (Offer))>
<!ATTLIST SOX
OfferDistributorID CDATA #REQUIRED
SenderDocUID CDATA #REQUIRED
Version CDATA #REQUIRED
AckRequested (Normal I Terse I Verbose) #REQUIRED
SOXType (Offer) #REQUIRED
>
<!--                                                                    -->
<!--      Target Server List element:  Optional. Offer Agent Routing Information    -->
<!--                                                                    -->
<!ELEMENT TargetServerList (Server+)>
<!ATTLIST TargetServerList
ServerCount CDATA #REQUIRED
>
<!ELEMENT Server (ServerID, ServicePriority)>
<!ELEMENT ServerID (#PCDATA)>
<!ELEMENT ServicePriority (#PCDATA)>
<!--                                      -->
<!--      Offer element: Required. Limit one Offer per document.    -->
<!--                                      -->
<!ELEMENT Offer ((OfferMaintReq, OfferRouteReq) I (OfferMaintReq) I (OfferRouteReq))>
<!ATTLIST Offer
OfferID CDATA #REQUIRED
>
<!--                                                                    -->
<!--      Offer Maintenance Request element: Offer Properties, Offer Conditions,    -->
<!--      Offer Rewards not needed for Delete action, required for Add or Replace.  -->
<!--                                                                    -->
<!ELEMENT OfferMaintReq (OfferProperties, OfferConditions, OfferRewards)?>
<!ATTLIST OfferMaintReq
Action (Add I Replace I Delete) #REQUIRED
>
<!--                                                                    -->
<!--      Offer Properties element:                                     -->
<!--                                                                    -->
<!ELEMENT OfferProperties (MemberOffer, StaffAllowed, OfferType, OfferXactLimit, OfferCustLimit,
OfferStartDateTime, OfferEndDateTime, OfferDescription, OfferReportDescription, OfferSponsorSettlementID,
DeferredReward)>
<!ELEMENT MemberOffer (#PCDATA)>
<!ELEMENT StaffAllowed (#PCDATA)>
<!ELEMENT OfferType (#PCDATA)>
<!ELEMENT OfferXactLimit (#PCDATA)>
<!ELEMENT OfferCustLimit EMPTY>
<!ELEMENT OfferStartDateTime (Year, Month, Day, Hour, Minute)>
<!ELEMENT Year (#PCDATA)>
```

```
<!ELEMENT Month (#PCDATA)>
<!ELEMENT Day (#PCDATA)>
<!ELEMENT Hour (#PCDATA)>
<!ELEMENT Minute (#PCDATA)>
<!ELEMENT OfferEndDateTime (Year, Month, Day, Hour, Minute)>
<!ELEMENT OfferDescription (#PCDATA)>
<!ELEMENT OfferReportDescription (#PCDATA)>
<!ELEMENT OfferSponsorSettlementID (#PCDATA)>
<!ELEMENT DeferredReward (#PCDATA)>
<!--                                    -->
<!--     Offer Conditions element:      -->
<!--                                    -->
<!ELEMENT OfferConditions (ConditionSet+)>
<!ATTLIST OfferConditions
ConditionSetCount CDATA #REQUIRED
>
<!ELEMENT ConditionSet (ItemPurchase I DeptPurchase I TotalPurchase I TimeOfDay I DayOfWeek)>
<!ATTLIST ConditionSet
ConditionSetID (0 I 1 I 2 I 3 I 4 I 5 I 6 I 7) #REQUIRED
>
<!--                                    -->
<!--     Offer Condition: Item Purchase   -->
<!--                                    -->
<!ELEMENT ItemPurchase (ItemList, CondChkFlag, MeasureValue)>
<!ATTLIST ItemPurchase
Measure (Quantity I Weight I Amount) #REQUIRED
>
<!ELEMENT ItemList (Item+)>
<!ATTLIST ItemList
ItemCount CDATA #REQUIRED
>
<!ELEMENT Item (#PCDATA)>
<!ELEMENT CondChkFlag (#PCDATA)>
<!ELEMENT MeasureValue (#PCDATA)>
<!--                                    -->
<!--     Offer Condition: Department Purchase    -->
<!--                                    -->
<!ELEMENT DeptPurchase (DeptList, CondChkFlag, Amount)>
<!ELEMENT DeptList (Dept+)>
<!ATTLIST DeptList
DeptCount CDATA #REQUIRED
>
<!ELEMENT Dept (#PCDATA)>
<!ELEMENT Amount (#PCDATA)>
<!--                                    -->
<!--     Offer Condition: Total Purchase       -->
<!--                                    -->
<!ELEMENT TotalPurchase (CondChkFlag, Amount)>
<!ATTLIST TotalPurchase
Includes (All I Discountable) #REQUIRED
>
<!--                                    -->
<!--     Offer Condition: Time of Day     -->
<!--                                    -->
<!ELEMENT TimeOfDay (StartTime, EndTime)>
<!ELEMENT StartTime (Hour, Minute)>
<!ELEMENT EndTime (Hour, Minute)>
<!--                                    -->
<!--     Offer Conditions: Day of the Week   -->
<!--                                    -->
<!ELEMENT DayOfWeek (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday)>
<!ELEMENT Sunday (#PCDATA)>
<!ELEMENT Monday (#PCDATA)>
<!ELEMENT Tuesday (#PCDATA)>
<!ELEMENT Wednesday (#PCDATA)>
<!ELEMENT Thursday (#PCDATA)>
```

```
<!ELEMENT Friday (#PCDATA)>
<!ELEMENT Saturday (#PCDATA)>
<!--                                    -->
<!--      Offer  Rewards  element:      -->
<!--                                    -->
<!ELEMENT OfferRewards (RewardSet+)>
<!ATTLIST OfferRewards
RewardSetCount CDATA #REQUIRED
>
<!ELEMENT RewardSet (ItemDiscount I DeptDiscount I TotalDiscount I FreeItem I ReplacementPriceMethod1)>
<!ATTLIST RewardSet
RewardSetID (0 I 1 I 2 I 3 I 4 I 5 I 6 I 7) #REQUIRED
>
<!--                                    -->
<!--      Offer  Reward:  Item Discount  -->
<!--                                    -->
<!ELEMENT ItemDiscount (ItemList, RewardLimit, BasisValue)>
<!ATTLIST ItemDiscount
Basis (Percent I Amount) #REQUIRED
>
<!ELEMENT RewardLimit (#PCDATA)>
<!ELEMENT BasisValue (#PCDATA)>
<!--                                    -->
<!--      Offer  Reward:  Department Discount  -->
<!--                                    -->
<!ELEMENT DeptDiscount (DeptList, RewardLimit, BasisValue)>
<!ATTLIST DeptDiscount
Basis (Percent I Amount) #REQUIRED
>
<!--                                    -->
<!--      Offer  Reward: Total  Discount -->
<!--                                    -->
<!ELEMENT TotalDiscount (RewardLimit, BasisValue)>
<!ATTLIST TotalDiscount
Basis (Percent I Amount) #REQUIRED
>
<!--                                    -->
<!--      Offer  Reward:  Free Item  -->
<!--                                    -->
<!ELEMENT FreeItem (ItemList, RewardLimit)>
<!--                                    -->
<!--      Offer  Reward:  Replacement Price Method1    -->
<!--                                    -->
<!ELEMENT ReplacementPriceMethod1 (ItemList, DealPrice, DealQuantity, RewardLimit)>
<!ELEMENT DealPrice (#PCDATA)>
<!ELEMENT DealQuantity (#PCDATA)>
<!--                                    -->
<!--      Offer Route Store Request  element:    Optional.   -->
<!--                                    -->
<!ELEMENT OfferRouteReq (StoreList+)>
<!--                                    -->
<!--      Store List element: Required.   -->
<!--                                    -->
<!ELEMENT StoreList (Store+)>
<!ATTLIST StoreList
Action (Add I Replace I Delete) #REQUIRED
StoreCount CDATA #REQUIRED
>
<!ELEMENT Store (StoreID, ServicePriority)>
<!ELEMENT StoreID (#PCDATA)>
```

DTD: SOXCustomerOffer.dtd.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!--
Standard Offer Exchange:  Customer Offer DTD
SOXCustomerOffer.dtd

Version 1.0 Draft
Date: 06/09/2000
ems, Copyright 2000
-->
<!--                                    -->
<!--      Revision History             -->
<!--                                    -->
<!--      SOX top element              -->
<!--                                    -->
<!ELEMENT SOX ((TargetServerList, CustomerOffer+) I (CustomerOffer+))>
<!ATTLIST SOX
OfferDistributorID CDATA #REQUIRED
SenderDocUID CDATA #REQUIRED
Version CDATA #REQUIRED
AckRequested (Normal I Terse I Verbose) #REQUIRED
CustomerOfferCount CDATA #REQUIRED
SOXType (CustomerOffer) #REQUIRED
>
<!--                                                                      -->
<!--      Target Server List element:  Optional. Customer Offer Agent Server  Routing Information  -->
<!--                                                                      -->
<!ELEMENT TargetServerList (Server+)>
<!ATTLIST TargetServerList
ServerCount CDATA #REQUIRED
>
<!ELEMENT Server (ServerID, ServicePriority)>
<!ELEMENT ServerID (#PCDATA)>
<!ELEMENT ServicePriority (#PCDATA)>
<!--                                                              -->
<!--      Customer Offer element: Required. One or more Customer Offers per document.    -->
<!--                                                              -->
<!ELEMENT CustomerOffer ((CustOfferMaintReq, CustOfferRouteReq) I (CustOfferMaintReq) I
(CustOfferRouteReq))>
<!ATTLIST CustomerOffer
OfferID CDATA #REQUIRED
MerchantID CDATA #REQUIRED
CustomerID CDATA #REQUIRED
>
<!ELEMENT CustOfferMaintReq ((CustOfferProperties, CustOfferRewards)? I (CustOfferProperties))>
<!ATTLIST CustOfferMaintReq
Action (Add I Replace I Delete I Activate) #REQUIRED
>
<!--                                    -->
<!--      Customer Offer Properties element:    -->
<!--                                    -->
<!ELEMENT CustOfferProperties ((OfferXactLimit, OfferCustLimit) I (OfferXactLimit))>
<!ELEMENT OfferXactLimit (#PCDATA)>
<!ELEMENT OfferCustLimit (#PCDATA)>
<!--                                    -->
<!--      Customer Offer Rewards element:  -->
<!--                                    -->
<!ELEMENT CustOfferRewards (RewardSet+)>
<!ATTLIST CustOfferRewards
RewardSetCount CDATA #REQUIRED
>
<!--                                                              -->
<!--      Customer Offer Rewards Set element: Overrides existing Offer Reward Set.    -->
<!--                                                              -->
```

```
<!ELEMENT RewardSet (ItemDiscount I DeptDiscount I TotalDiscount I ReplacementPriceMethod1)>
<!ATTLIST RewardSet
RewardSetID (0 I 1 I 2 I 3 I 4 I 5 I 6 I 7) #REQUIRED
>
<!--                                                          -->
<!--       Customer Offer Reward:  Item Discount -->
<!--                                                          -->
<!ELEMENT ItemDiscount (BasisValue)>
<!ATTLIST ItemDiscount
Basis (Percent I Amount) #REQUIRED
>
<!ELEMENT BasisValue (#PCDATA)>
<!--                                                          -->
<!--       Customer Offer Reward:  Department Discount -->
<!--                                                          -->
<!ELEMENT DeptDiscount (BasisValue)>
<!ATTLIST DeptDiscount
Basis (Percent I Amount) #REQUIRED
>
<!--                                                          -->
<!--       Customer Offer Reward: Total  Discount    -->
<!--                                                          -->
<!ELEMENT TotalDiscount (BasisValue)>
<!ATTLIST TotalDiscount
Basis (Percent I Amount) #REQUIRED
>
<!--                                                          -->
<!--       Customer Offer  Reward: Replacement Price Method1 -->
<!--                                                          -->
<!ELEMENT ReplacementPriceMethod1 (DealPrice)>
<!ELEMENT DealPrice (#PCDATA)>
<!--                                                          -->
<!--       Customer Offer Route Store Request  element: Optional.   -->
<!--                                                          -->
<!ELEMENT CustOfferRouteReq (StoreList+)>
<!--                                         -->
<!--       Store List element: Required.   -->
<!--                                         -->
<!ELEMENT StoreList (Store+)>
<!ATTLIST StoreList
Action (Add I Replace I Delete I Activate) #REQUIRED
StoreCount CDATA #REQUIRED
>
<!ELEMENT Store (StoreID, ServicePriority)>
<!ELEMENT StoreID (#PCDATA)>
```

DTD: SOXOfferAck.dtd.

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
Standard Offer Exchange:  Offer Acknowledgement DTD
SOXOfferAck.dtd

Version 1.0 Draft
Date: 06/09/2000
ems, Copyright 2000
-->
<!--                              -->
<!--     Revision History         -->
<!--                              -->
<!--     SOX top element          -->
<!--                              -->
<!ELEMENT SOX ((OfferAck, TargetServerList, Offer) | (OfferAck, Offer))>
<!ATTLIST SOX
Version CDATA #REQUIRED
SOXType (OfferAck) #REQUIRED
>
<!--                                                      -->
<!--     Offer Acknowledgement elements:  For this Offer document.    -->
<!--                                                      -->
<!ELEMENT OfferAck (DistributorID, AckRequested, SenderDocUID, SessionID, OfrRcptCtrlID, SenderID, Date,
Time, TimeZone)>
<!ELEMENT DistributorID (#PCDATA)>
<!ELEMENT AckRequested (#PCDATA)>
<!ELEMENT SenderDocUID (#PCDATA)>
<!ELEMENT SessionID (#PCDATA)>
<!ELEMENT OfrRcptCtrlID (#PCDATA)>
<!ELEMENT SenderID (#PCDATA)>
<!ELEMENT Date (Year, Month, Day)>
<!ELEMENT Year (#PCDATA)>
<!ELEMENT Month (#PCDATA)>
<!ELEMENT Day (#PCDATA)>
<!ELEMENT Time (Hour, Minute, Second)>
<!ELEMENT Hour (#PCDATA)>
<!ELEMENT Minute (#PCDATA)>
<!ELEMENT Second (#PCDATA)>
<!ELEMENT TimeZone (#PCDATA)>
<!--                                                           -->
<!--     Status and Result elements:  For each Offer Agent Server Routing Request      -->
<!--                                                           -->
<!ELEMENT TargetServerList (Server+)>
<!ATTLIST TargetServerList
ServerCount CDATA #REQUIRED
>
<!ELEMENT Server (ServerID, ServicePriority, Status, Result)>
<!ELEMENT ServerID (#PCDATA)>
<!ELEMENT ServicePriority (#PCDATA)>
<!ELEMENT Status (#PCDATA)>
<!ELEMENT Result (ResultCode, ResultSeverity, ResultDescription, ResultCondition)>
<!ELEMENT ResultCode (#PCDATA)>
<!ELEMENT ResultSeverity (#PCDATA)>
<!ELEMENT ResultDescription (#PCDATA)>
<!ELEMENT ResultCondition (#PCDATA)>
<!--                    -->
<!--     Offer element:    -->
<!--                    -->
<!ELEMENT Offer ((OfferMaintReq, OfferRouteReq) | (OfferMaintReq) | (OfferRouteReq))>
<!ATTLIST Offer
OfferID CDATA #REQUIRED
>
<!--                                    -->
```

```
<!--      Offer Maintenance Request  element   -->
<!--                                             -->
<!ELEMENT OfferMaintReq (OfferProperties, OfferConditions, OfferRewards)?>
<!ATTLIST OfferMaintReq
Action (Add | Replace | Delete) #REQUIRED
>
<!--                                                      -->
<!--      Status and Result  elements:  For Offer Properties    -->
<!--                                                      -->
<!ELEMENT OfferProperties (Status, Result)>
<!--                                                              -->
<!--      Status and Result  elements:  For each Offer Conditions Set    -->
<!--                                                              -->
<!ELEMENT OfferConditions (ConditionSet+)>
<!ATTLIST OfferConditions
ConditionSetCount CDATA #REQUIRED
>
<!ELEMENT ConditionSet (Status, Result)>
<!ATTLIST ConditionSet
ConditionSetID (0 | 1 | 2 | 3 | 4 | 5 | 6 | 7) #REQUIRED
>
<!--                                                      -->
<!--      Status and Result  elements:  For each Offer Rewards Set  -->
<!--                                                      -->
<!ELEMENT OfferRewards (RewardSet+)>
<!ATTLIST OfferRewards
RewardSetCount CDATA #REQUIRED
>
<!ELEMENT RewardSet (Status, Result)>
<!ATTLIST RewardSet
RewardSetID (0 | 1 | 2 | 3 | 4 | 5 | 6 | 7) #REQUIRED
>
<!--                                                              -->
<!--      Status and Result  elements:  For each Offer Store Route Request    -->
<!--                                                              -->
<!ELEMENT OfferRouteReq (StoreList+)>
<!ELEMENT StoreList (Store+)>
<!ATTLIST StoreList
Action (Add | Replace | Delete) #REQUIRED
StoreCount CDATA #REQUIRED
>
<!ELEMENT Store (StoreID, ServicePriority, Status, Result)>
<!ELEMENT StoreID (#PCDATA)>
```
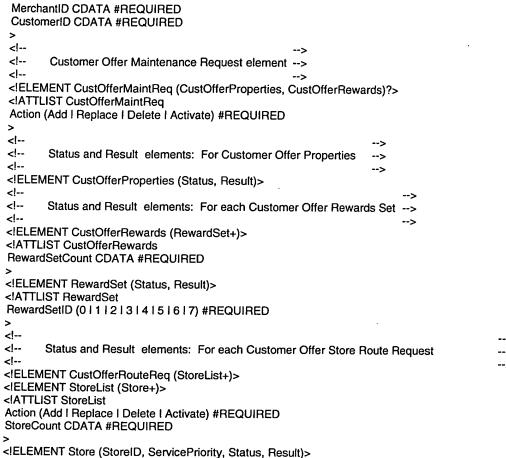
DTD: SOXCustomerOfferAck.dtd

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
Standard Offer Exchange:  Customer Offer Acknowledgement DTD
SOXCustomerOfferAck.dtd

Version 1.0 Draft
Date: 06/09/2000
ems, Copyright 2000
-->
<!--                                            -->
<!--        Revision History                    -->
<!--                                            -->
<!--        SOX top element                     -->
<!--                                            -->
<!ELEMENT SOX ((CustOfferAck, TargetServerList, CustomerOffer+) I (CustOfferAck, CustomerOffer+))>
<!ATTLIST SOX
Version CDATA #REQUIRED
CustomerOfferCount CDATA #REQUIRED
SOXType (CustomerOfferAck) #REQUIRED
>
<!--                                                                              -->
<!--     Customer Offer Acknowledgement elements:  For this Customer Offer document.      -->
<!--                                                                              -->
<!ELEMENT CustOfferAck (DistributorID, AckRequested, SenderDocUID, SessionID, OfrRcptCtrlID, SenderID,
Date, Time, TimeZone)>
<!ELEMENT DistributorID (#PCDATA)>
<!ELEMENT AckRequested (#PCDATA)>
<!ELEMENT SenderDocUID (#PCDATA)>
<!ELEMENT SessionID (#PCDATA)>
<!ELEMENT OfrRcptCtrlID (#PCDATA)>
<!ELEMENT SenderID (#PCDATA)>
<!ELEMENT Date (Year, Month, Day)>
<!ELEMENT Year (#PCDATA)>
<!ELEMENT Month (#PCDATA)>
<!ELEMENT Day (#PCDATA)>
<!ELEMENT Time (Hour, Minute, Second)>
<!ELEMENT Hour (#PCDATA)>
<!ELEMENT Minute (#PCDATA)>
<!ELEMENT Second (#PCDATA)>
<!ELEMENT TimeZone (#PCDATA)>
<!--                                                                              -->
<!--     Status and Result elements:  For each Customer Offer Agent Server Routing Request    -->
<!--                                                                              -->
<!ELEMENT TargetServerList (Server+)>
<!ATTLIST TargetServerList
ServerCount CDATA #REQUIRED
>
<!ELEMENT Server (ServerID, ServicePriority, Status, Result)>
<!ELEMENT ServerID (#PCDATA)>
<!ELEMENT ServicePriority (#PCDATA)>
<!ELEMENT Status (#PCDATA)>
<!ELEMENT Result (ResultCode, ResultSeverity, ResultDescription, ResultCondition)>
<!ELEMENT ResultCode (#PCDATA)>
<!ELEMENT ResultSeverity (#PCDATA)>
<!ELEMENT ResultDescription (#PCDATA)>
<!ELEMENT ResultCondition (#PCDATA)>
<!--                               -->
<!--     Customer Offer element:   -->
<!--                               -->
<!ELEMENT CustomerOffer ((CustOfferMaintReq, CustOfferRouteReq) I (CustOfferMaintReq) I
(CustOfferRouteReq))>
<!ATTLIST CustomerOffer
OfferID CDATA #REQUIRED
```

```
MerchantID CDATA #REQUIRED
CustomerID CDATA #REQUIRED
>
<!--                                                    -->
<!--      Customer Offer Maintenance Request element -->
<!--                                                    -->
<!ELEMENT CustOfferMaintReq (CustOfferProperties, CustOfferRewards)?>
<!ATTLIST CustOfferMaintReq
Action (Add I Replace I Delete I Activate) #REQUIRED
>
<!--                                                    -->
<!--      Status and Result  elements:  For Customer Offer Properties    -->
<!--                                                    -->
<!ELEMENT CustOfferProperties (Status, Result)>
<!--                                                    -->
<!--      Status and Result  elements:  For each Customer Offer Rewards Set -->
<!--                                                    -->
<!ELEMENT CustOfferRewards (RewardSet+)>
<!ATTLIST CustOfferRewards
RewardSetCount CDATA #REQUIRED
>
<!ELEMENT RewardSet (Status, Result)>
<!ATTLIST RewardSet
RewardSetID (0 I 1 I 2 I 3 I 4 I 5 I 6 I 7) #REQUIRED
>
<!--                                                    -->
<!--      Status and Result  elements:  For each Customer Offer Store Route Request    -->
<!--                                                    -->
<!ELEMENT CustOfferRouteReq (StoreList+)>
<!ELEMENT StoreList (Store+)>
<!ATTLIST StoreList
Action (Add I Replace I Delete I Activate) #REQUIRED
StoreCount CDATA #REQUIRED
>
<!ELEMENT Store (StoreID, ServicePriority, Status, Result)>
<!ELEMENT StoreID (#PCDATA)>
```

1.1 DTD: SOXErrorResponse.dtd.

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
Standard Offer Exchange:  Error Response DTD
SOXErrorReponse.dtd

Version 1.0 Draft
Date: 06/09/2000
ems, Copyright 2000
-->
<!--                                    -->
<!--     Revision History              -->
<!--                                    -->
<!--     SOX top element               -->
<!--                                    -->
<!ELEMENT SOX (ErrorResponse)>
<!ATTLIST SOX
Version CDATA #REQUIRED
SOXType (ErrorResponse) #REQUIRED
>
<!--                                                      -->
<!--     Error Response element: For this document.   -->
<!--                                                      -->
<!ELEMENT ErrorResponse (SenderDocUID, ErrorCode, ErrorDescription, ErrorCondition, ErrorMessage,
ErrorSource, Date, Time, TimeZone, SessionID, OfrRcptCtrlID, SenderID, DTDErrorList)>
<!ELEMENT SenderDocUID (#PCDATA)>
<!ELEMENT ErrorCode (#PCDATA)>
<!ELEMENT ErrorDescription (#PCDATA)>
<!ELEMENT ErrorCondition (#PCDATA)>
<!ELEMENT ErrorMessage (#PCDATA)>
<!ELEMENT ErrorSource (#PCDATA)>
<!ELEMENT Date (Year, Month, Day)>
<!ELEMENT Year (#PCDATA)>
<!ELEMENT Month (#PCDATA)>
<!ELEMENT Day (#PCDATA)>
<!ELEMENT Time (Hour, Minute, Second)>
<!ELEMENT Hour (#PCDATA)>
<!ELEMENT Minute (#PCDATA)>
<!ELEMENT Second (#PCDATA)>
<!ELEMENT TimeZone (#PCDATA)>
<!ELEMENT SessionID (#PCDATA)>
<!ELEMENT OfrRcptCtrlID (#PCDATA)>
<!ELEMENT SenderID (#PCDATA)>
<!ELEMENT DTDErrorList (DTDError+)>
<!ATTLIST DTDErrorList
DTDErrorCount CDATA #REQUIRED
>
<!ELEMENT DTDError (PathName, ErrorCode, ErrorMessage)>
<!ELEMENT PathName (#PCDATA)>
```